PROCEEDINGS

OF THE

MADRAS GOVERNMENT

IN THE

PUBLIC WORKS DEPARTMENT,

IRRIGATION BRANCH,

FOR THE

MONTH OF AUGUST 1890.

Printed by Authority.

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1890.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper:—

From Colonel J. PENNYCUICK, R.E., Chief Engineer, Periyár Project, to the Chief Engineer for Irrigation, dated Periyár, 21st July 1890, No. 1189 P.R.

I have the honor to forward herewith a revised estimate for constructing a main work shed at Periyár, amounting to Rs. 17,570, for sanction, and to state that the excess is due partly to a slight increase in height which has been found necessary to allow for the free working of the machinery, but chiefly to an increase in the cost of timber.

2. At the time the latter was prepared the organization of labor was incomplete and the cost of transporting and working up heavy beams was greater than was anticipated.

Note by the Chief Engineer, Public Works Department.

Submitted to Government with a recommendation that the revised estimate of Rs. 17,600, as slightly increased in this office, be sanctioned.

(Signed) J. PENNYCUICK, Colonel, R.E.,
4th August 1890. Chief Engineer, Public Works Department.

ORDER—dated 12th August 1890, No. 434 I., Public Works.

The following revised estimate, amounting to Rs. 17,600, for constructing the main work shed at Periyár, is sanctioned in supersession of the estimate of Rs. 13,700 previously sanctioned,* the excess of Rs. 3,900 being met from the balance of the amount reserved for unforeseen works of the Periyár Project, which will then be reduced to Rs. 16,125:—

* *Vide* Memo. No. 110, M.D., dated 21st November 1888, from Chief Engineer for Irrigation.

Capital Expenditure not charged to Revenue.
49. Irrigation.
Periyár Project.
I. Works.
(1) Head Works.
K. Buildings.

	RS.
Constructing the main work shed at Periyár, estimate	17,600

2. This sanction has been registered as No. 42 I. of 1890-91.

(True Extract.)

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Chief Engineer for Irrigation.
" Superintending Engineer, Periyár Project, with four enclosures.
" Examiner, Public Works Accounts.
" Revenue Department.

IRRIGATION.
ACCOUNT.

Govt. of {1890} Madras.

PUBLIC WORKS.

Dated August, 12th.

Recd. *Encl.*

G.O., 12th Aug. 1890, No. 434 I.

AUGUST.

Main Work Shed at Periyar

Revised estimate amounting to Rs. 17,600 for constructing the —, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following papers :—

From Major D. McNEIL CAMPBELL, R.E., Superintending Engineer, Periyár Project, to the Chief Engineer, Public Works Department, dated Periyár, 11th August 1890, No. 1350 P.R.

I have the honor to submit herewith the report of progress of works in No. I Periyár Division for July last, and to state that the one for works in No. II Division will be forwarded as soon as the required information is obtained from the Executive Engineer, to whom reminders have been forwarded.

ENCLOSURE.

Notes of progress of Works in No. I Periyár Division for July 1890.

The weather was unusually favorable during the latter part of June and up to the middle of July, and a considerable quantity of work has been done at a season when as a rule everything is at a standstill on account of rain.

2. *Main Dam.*—The masonry of the front wall was continued on the left flank and the portion which had been left at 16 was raised to about 25. Clearing the diversion was proceeded with. The foundations for the continuation of the front wall beyond the diversion were got out, down to solid rock, which was found pretty level for some 30 feet at about zero and then shelved suddenly up to about 7. The masonry for a solid wall was commenced here. The 12 horse-power engine was run out to its place on the pier on the 16th and pumping commenced on the 17th. On the 19th heavy rain began and pumping was stopped. The river began to rise, and on the 22nd was at 17·5 in the upper gauge. All work was stopped at the river for these four days. The two 2-feet piers in the front line of the dam were carried away, but no further damage done. The weather still continued wet, but the river gradually subsided and pumping was recommenced on the 28th. Masonry on the left flank and in the foundation of the front wall was also resumed.

3. *Right Bank Escape.*—Some 300 Malayali coolies arrived in the latter part of June and worked steadily through the month on the escape, making considerable progress.

4. The buildings were repaired, clerks' lines improved and rethatched, and some new quarters built.

5. At Thekady the diversion of the Mullapanjan was completed with the exception of cutting the 8 feet drop to bring it into the water-shed cutting. The flood of the 22nd July broke into the diversion and cut away its banks at the end, widening the channel considerably and depositing the mud and sand in the water-shed cutting. The latter had been in progress and was nearly down to full depth as far as the bund below the cooly lines. It is now filled with the silt from the diversion. This means little or no harm, as the water has done for itself the work that we must have done in the diversion, and the stuff has now to be removed from the cutting instead of from the diversion.

6. A slight breach occurred at the same time round the quoin of No. I lock, but this is not serious.

7. On the night of the 22nd the weir of lock No. 2 was carried away, probably by timber dashing against it. This is not an extensive structure, but may give some trouble to rebuild at this season.

8. The Mullapanjan dams are in good order. Some masonry has been commenced in connection with the unloading arrangements. It has been very difficult to do any work here as well as on the cutting in No. 4 reach (the only operation left to make the water transport complete) on account of the unhealthiness at this camp. The contractor and all his coolies who were employed on this work left on this account.

9. Satisfactory progress was made on the wire tramway. With the exception of one hold-down, the line of posts from the terminal at Thekedy to the driving station is complete. A syrang with a gang of lascars have been engaged to erect the posts and have been at work during the month.

10. Machine drilling at the tunnel recommenced on the 1st July, and twenty days' work with an advance of about 5 feet a day or 100 feet during the month has been done. The total length of tunnel finished to end of July is 547 feet. Much trouble has been caused by land-slips along the turbine channel, causing frequent delay. A new cut has been commenced which will obviate this to a great extent and considerably increase the efficiency of the channel.

11. On the whole more work has been possible during the month than in previous years at the same season owing to the comparatively scanty rainfall.

12. The health, with the exception of the Muliapanjan camp, has been fairly good.

(Signed) H. S. TAYLOR,
Executive Engineer, No. I Periyár Division.

4th August 1890.

Note by the Chief Engineer, Public Works Department.

Submitted to Government.

2. The progress is unusually good for the time of year.

3. The damage done by the floods of the 22nd is not important, but every endeavour should be made to strengthen the bye-wash on the flank of the water-shed cutting so as to prevent irruptions of the river which cause annoying interruptions of work even if they do no serious harm.

OOTACAMUND,
18th August 1890.

(Signed) J. PENNYCUICK, Colonel, R.E.,
Chief Engineer, P.W.D.

ORDER—dated 25th August 1890, No. 457 I., Public Works.

The report is satisfactory.

2. A copy of these Proceedings will be forwarded to the Government of India in continuation of endorsement No. 302 I., dated 23rd May 1890.

(Here enter No. 458 I., dated 25th August 1890.)

(True Extract.)

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, Periyár Project.
„ Revenue Department.

ENDORSEMENT—dated 25th August 1890, No. 458 I., Public Works.

Forwarded.

(By Order.)

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

IRRIGATION.

Govt. of {1890} Madras.

PUBLIC WORKS.

Dated August, 25th.

Recd. *Encl.*

G.O., 25th Aug. 1890, Nos. 457 I., 458 I.

AUGUST.

Periyar Works

Forwarding the progress report of works in No. I Periyár Division for July 1890.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper :—

From Major D. McNEIL CAMPBELL, R.E., Superintending Engineer, Periyár Project, to the Chief Engineer, Public Works Department, dated Periyár, 7th August 1890, No. 1323 P.R.

In forwarding, herewith, the letter and estimate for two portable engines received from the Executive Engineer, No. I Periyár division, with his No. 153 S.E., dated 5th August 1890, I have the honor to recommend strongly that the estimate be sanctioned for the reasons given by the Executive Engineer, in which I fully concur.

2. I request that the estimate may be sanctioned from the balance at the disposal of the Chief Engineer for Irrigation under Tools and Plant, Minor and Unforeseen items.

ENCLOSURE.

From H. S. TAYLOR, Esq., Executive Engineer, No. I Periyár Division, to the Superintending Engineer, Periyár Project, dated Periyár, 5th August 1890, No. 153 S.E.

I have the honor to represent the advisability of getting up one at least if not two more engines for use on the works.

We have at present—

(1) 12-horse power which is on the pier for pumping. This engine cannot be used for anything else as it cannot be moved from its present position for a long time.

(2) 6-horse power now used for breaking concrete.

(3) 8-horse power at the saw mill in the depôt.

The last named, if it is found that it is not urgently required at the dam, will be used for sawing up all the timber logs which will be brought to it as soon as elephants come, and by that time it will be wanted for pumping at the head of the water-shed cutting.

The 6-horse power will be required for concrete breaking or mortar mixing for some time yet.

This disposes of all the engines we have at present. One more at least is wanted at once to work the sand pump.

After the machinery in the workshop is all going we shall require—

(1) the 12-horse power where it is now ;
(2) the 8-horse power at Thekady ;
(3) one engine on the sand pump ;
(4) to supplement any one of the above which might go wrong.

The last I think is very essential, so that both for present and future work one more engine is required, and it is a question whether it would not be advisable to get a second additional one at once.

There will be a great deal of masonry to get through before the machinery is in full working order, and we have only one engine available for the operation of stone breaking, soorkee grinding and mixing mortar besides the sand pump.

	RS.
The cost of an engine from some other work would not be more than	3,000
Add 15 per cent. for carriage	3,450
When done with the engine could be taken to another work for ...	450
Total ...	3,900
and transferred for, say, Rs. 2,000, showing a nett expenditure on it of ...	1,900

I submit that Rs. 4,000 thus spent on two engines will be amply covered by the work which would be performed by them, and on these grounds I forward an estimate of the probable cost of obtaining them.

I believe there are engines which will soon be, if they are not already, available at the Cuddalore bridge works, and I am writing to the Executive Engineer for particulars so that no time may be lost in procuring the engines after the estimate is sanctioned.

Order—dated 25th August 1890, No. 460 I., Public Works.

The following estimate is sanctioned from the balance of the lump sum provision available for tools and plant of the Periyár project, which will then be reduced to Rs. 42,648 :—

Capital Expenditure not charged to Revenue.
49. Irrigation.
Periyár Project.
III. Tools and Plant.
12. Miscellaneous.

	RS.
Procuring two 6 to 10 horse power engines, estimate	7,200

2. This sanction has been registered as No. 50 I. of 1890-91.

3. The local purchase of the engines is sanctioned if they cannot be obtained from the Public Works Stores or by transfer from other works.

(True Extract.)

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, Periyár Project,
with one estimate.
" Examiner, Public Works Accounts.
" Chief Engineer for Irrigation.
" Revenue Department.

IRRIGATION.
ACCOUNT.

Govt. of {1890} Madras.

PUBLIC WORKS.

Dated August, 25th.

Recd. *Encl.*

G.O., 25th Aug. 1890, No. 460 I.

AUGUST.

Engines for the Periyar Project

Estimate of Rs. 7,200 for procuring two 6 to 10 horse power —, sanctioned with remarks.